

**SERIAL NO. 10/005,312****Docket No. 1594.1025****REMARKS****INTRODUCTION:**

In accordance with the foregoing, claims 49 and 51 have been amended to include "6" so as to depend from claim 16. No new matter is being presented, and approval and entry are respectfully requested.

Claims 16-26 and 29-53 are pending and under consideration. Reconsideration is requested.

**ENTRY OF AMENDMENT UNDER 37 C.F.R. §1.116:**

Applicant requests entry of this Rule 116 Response because:

(1) the amendments of claims 49 and 51 should not entail any further search by the Examiner since no new features are being added or no new issues are being raised in view of the existing other claims; and

(2) the amendments do not significantly alter the scope of the claims and place the application at least into a better form for purposes of appeal. No new features or new issues are being raised.

The Manual of Patent Examining Procedures sets forth in Section 714.12 that "any amendment that would place the case either in condition for allowance or in better form for appeal may be entered." Moreover, Section 714.13 sets forth that "the Proposed Amendment should be given sufficient consideration to determine whether the claims are in condition for allowance and/or whether the issues on appeal are simplified." The Manual of Patent Examining Procedures further articulates that the reason for any non-entry should be explained expressly in the Advisory Action.

**REQUEST FOR ACKNOWLEDGEMENT:**

On page 1 of the Office Action, the Examiner has not acknowledged receipt of the

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certified copy of Korean Patent Application No. 2001-47535, which was filed on March 3, 2004.

As such, it is respectfully requested that the Examiner acknowledge this item.

**OBJECTIONS TO THE CLAIMS:**

In the Office Action at page 2, the Examiner objects to claims 49-52 as depending from claim 1, which has been cancelled. Claims 49 and 51 have been amended to include a "6" so as to properly depend from claim 16. As such, it is respectfully requested that the Examiner reconsider and withdraw the objection.

**REJECTION UNDER 35 U.S.C. §102:**

In the Office Action at page 2, the Examiner rejects claims 16-26, 30, 31, 33, and 35 under 35 U.S.C. §102 in view of Miyoshi et al. (U.S. Patent No. 4,520,341). This rejection is respectfully traversed and reconsideration is requested.

By way of review, Miyoshi et al. discloses a moisture responsive element having a continuous polymer membrane 4 that is stretched across conductive members 2 such that the conductive members 2 are between the polymer membrane 4 and a substrate 1. In order to detect humidity or moisture, Miyoshi et al. teaches that the membrane 4 has a cross-linked polymer using a hydrophilic group such that the membrane 4, when exposed to moisture, provides an electrical pathway between the conductive members 2. (Col. 2, lines 55-68, col. 3, lines 33-42 and 56-59, col. 4, lines 56-59; FIG. 1). The pathway across the membrane 4 has an impedance "that varies in response to humidity." (Col. 3, lines 57-58). However, while the membrane 4 is used to detect humidity, Miyoshi et al. does not suggest that the moisture contacts a space between the membrane 4 and the substrate 1, or that any such contact is used to determine humidity since Miyoshi et al. instead relies on the "absorption and desorption of water molecules in the humidity responsive membrane." (Col. 2, lines 59-61).

In contrast, claim 16 recites, among other features, "the gas is received into the gap such

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that the liquid forms a conductive path between said first and second electrodes as to vary a resistance across the gap" and "a bottom portion of the gap exposed to the gas comprises a non-conductive material." As such, it is respectfully submitted that Miyoshi et al. does not disclose or suggest the invention recited in claim 16.

For similar reasons, it is respectfully submitted that Miyoshi et al. does not disclose or suggest the invention recited in claim 30.

Additionally, Miyoshi et al. does not suggest that, if gas passes through the membrane 4, any moisture remains in the gas since the membrane 4 is designed to absorb any moisture in the gas in order to provide an accurate reading. (Col. 2, lines 55-68). As such, it is respectfully submitted that Miyoshi et al. does not disclose or suggest, among other features, "a non-conductive layer of the non-conductive material to form the bottom of the gap and which extends between sidewalls of the first and second electrodes" and "the liquid is deposited on said board so as to vary a resistance between said first and second electrodes" as recited in claim 19.

Lastly, while Miyoshi et al. depends on the change in impedance due to the absorption of moisture by the membrane 4, Miyoshi et al. does not suggest that the impedance between the conductive members 2 varies additionally based on gas disposed between the membrane 4 and the substrate 1, or that the impedance varies based on positions and or a size areas of the conductive members 2 exposed to the gas in the gap. As such, it is respectfully submitted that Miyoshi et al. does not disclose or suggest "an amount of resistance between said first and second electrodes across the gap corresponds to cross sectional areas of the side walls exposed to the gas in the gap" as recited in claim 22.

For similar reasons, it is respectfully submitted that Miyoshi et al. does not disclose or suggest the invention recited in claim 24.

Claims 17-18, 20-21, 23, 25, 26, 31, 33, and 35 are deemed patentable due at least to their depending from corresponding claims 16 and 30.

**SERIAL NO. 10/005,312****Docket No. 1594.1025****STATUS OF CLAIMS NOT REJECTED IN OFFICE ACTION**

On pages 2-3 of the Office Action, the Examiner allows claims 29, 32, 36-48, and 53, and objects to claim 34 as depending from a rejected claim.

**CONCLUSION:**

In accordance with the foregoing, it is respectfully submitted that all outstanding objections and rejections have been overcome and/or rendered moot. And further, that all pending claims patentably distinguish over the prior art. Thus, there being no further outstanding objections or rejections, the application is submitted as being in condition for allowance which action is earnestly solicited. At a minimum, this Amendment should be entered at least for purposes of Appeal as it either clarifies and/or narrows the issues for consideration by the Board.

If the Examiner has any remaining issues to be addressed, it is believed that prosecution can be expedited and possibly concluded by the Examiner contacting the undersigned attorney for a telephone interview to discuss any such remaining issues.

If there are any additional fees associated with the filing of this Response, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

STAAS &amp; HALSEY LLP

By: James G. McEwen  
Registration No. 41,983

1201 New York Avenue, NW, Suite 700  
Washington, D.C. 20005  
Telephone: (202) 434-1500  
Facsimile: (202) 434-1501

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I hereby certify that this correspondence is being transmitted via facsimile to: Commissioner for Patents,  
P.O. Box 1450, Alexandria, VA 22313-1450  
on JUNE 7, 2004  
By: STAAS & HALSEY  
Date: JUNE 7, 2004